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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,837	11/14/2000	Yoshiko Miyamoto	1341.1071 (JDH:MJH)	5630

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EXAMINER	
DUONG, THOMAS	

ART UNIT	PAPER NUMBER
2145	

MAIL DATE	DELIVERY MODE
10/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/710,837	MIYAMOTO, YOSHIKO	
	Examiner	Art Unit	
	Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

2. Amendment received June 19, 2007 has been entered into record. *Claims 1-11* remain pending.

Response to Amendment

3. This office action is in response to the Applicant's Amendment filed on June 19, 2007. Applicant amended *claims 1-10* and added *claim 11*. *Claims 1-11* are presented for further consideration and examination.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. *Claims 1-11* are rejected under 35 U.S.C. 103(a) as being unpatentable over Glass et al. (US006629128B1), in view of O'Neil et al. (US006128279A), and further in view of Dugan et al. (US006425005B1).

6. With regard to *claims 1 and 5-8*, Glass discloses,

- *a request receiving unit which receives a request from an apportioning server, initially sent by a client connected via a network, to acquire a CORBA object reference for receiving a distribution of a naming service in CORBA,* (Glass, col.1, lines 32-46; col.2, line 60 – col.3, line 13; col.3, lines 46-51; col.4, lines 8-12, lines 43-46; col.6, lines 31-35, lines 39-47, lines 51-54; col.7, lines 56-61; col.10, lines 48-59; fig.3-4)

  Glass discloses, *"the present invention also dynamically generates remote proxies and other objects to provide communications across the network"* (Glass, col.4, lines 43-46). In addition, Glass discloses, *"the remote proxy generator resides in the server-side object request broker and instantiates the remote proxy class to create a remote proxy object"* (Glass, col.4, lines 8-10) and that *"a system constructed using the principles outlined in this patent application dynamically generates remote proxy classes as needed at run-time"* (Glass, col.6, lines 51-54). Hence, Glass teaches of a system for distributed processing in a computer network that dynamically generates remote proxies and other objects to provide communications across the network. Glass discloses, *"The distributed object management system 16 may comprise Voyager, a distributed network communications system developed by ObjectSpace, Inc., CORBA (Common Object Request Broker Architecture), a technology for inter-object*

communications developed by a consortium of companies, DCOM, an inter-application communications system for networked computers developed by Microsoft, RMI, an inter-object communications system for networked computers developed by Sun Microsystems, Inc., or any other suitable distributed object management system" (Glass, col.5, lines 47-57). Hence, Glass teaches of the distributed object management system utilizing CORBA technology.

- *a generating unit which generates, dynamically, the CORBA object reference of the naming service in a hot standby environment by dynamically setting address information contained in the CORBA object reference in accordance with connection information at a time of the request.* (Glass, col.1, lines 32-46; col.2, line 60 – col.3, line 13; col.3, lines 46-51; col.4, lines 8-12, lines 43-46; col.6, lines 31-35, lines 39-47, lines 51-54; col.7, lines 56-61; col.10, lines 48-59; fig.3-4)

  Glass discloses, *"the present invention also dynamically generates remote proxies and other objects to provide communications across the network"* (Glass, col.4, lines 43-46). In addition, Glass discloses, *"the remote proxy generator resides in the server-side object request broker and instantiates the remote proxy class to create a remote proxy object"* (Glass, col.4, lines 8-10) and that *"a system constructed using the principles outlined in this patent application dynamically generates remote proxy classes as needed at run-time"* (Glass, col.6, lines 51-54). Hence, Glass teaches of a system for distributed processing in a computer network that dynamically generates remote proxies and other objects to provide communications across the network. Glass discloses, *"The distributed object management system 16 may comprise Voyager, a distributed*

network communications system developed by ObjectSpace, Inc., CORBA (Common Object Request Broker Architecture), a technology for inter-object communications developed by a consortium of companies, DCOM, an inter-application communications system for networked computers developed by Microsoft, RMI, an inter-object communications system for networked computers developed by Sun Microsystems, Inc., or any other suitable distributed object management system" (Glass, col.5, lines 47-57). Hence, Glass teaches of the distributed object management system utilizing CORBA technology.

However, Glass does not explicitly teach,

- *a request receiving unit which receives a request from an apportioning server, initially sent by a client connected via a network, to acquire an object reference for receiving a distribution of a naming service in CORBA,*
- *wherein the apportioning server has determined whether an arrival IP address is an apportioning IP address, and if the result is negative, establishes a connection with the arrival IP address, and if the result is positive, distributes a load to a server having a lightest load in comparison with other servers; and*

O'Neil teaches,

- *a request receiving unit which receives a request from an apportioning server, initially sent by a client connected via a network, to acquire an object reference for receiving a distribution of a naming service in CORBA,* (O'Neil, col.1, line 4 – col.9, line 38)

  O'Neil discloses, *"The present invention addresses the foregoing needs by providing, in one aspect, a plurality of network servers which directly handle load balancing on a peer-to-peer basis. Thus, when any of the servers receives a*

request, the server either processes the request or routes the request to one of its peers --depending on their respective loads and/or on the contents of the request. By implementing load balancing directly on the servers, the need for dedicated load balancing hardware is reduced, as are the disadvantages resulting from such hardware. Thus, for example, because each server has the capability to perform load balancing, access to a Web site managed by the server is not subject to a single point of failure. Moreover, requests tagged with IP addresses cached by remote DNSs or the requestor itself are handled in the same way as other requests, i.e., by being routed among the load balancing-enabled servers" (O'Neil, col.3, lines 18-33). Hence, O'Neil teaches that when any of the servers (i.e., Applicant's apportioning server) receiving a request, the server either processes the request (i.e., Applicant's establishes a connection with the arrival IP address) or routes the request to one of its peer—depending on their respective loads (i.e., Applicant's distributes a load to a server having a lightest load in comparison with other servers) and/or on the contents of the request. O'Neil discloses, *"The invention has particular utility in connection with World Wide Web servers, but can be used with other servers as well, such as CORBA servers, ORB servers, FTP servers, SMTP servers, and Java servers"* (O'Neil, col.1, lines 14-17). Hence, O'Neil teaches of the load balancing system used in a CORBA server environment.

- *wherein the apportioning server has determined whether an arrival IP address is an apportioning IP address, and if the result is negative, establishes a connection with the arrival IP address, and if the result is positive, distributes a load to a*

server having a lightest load in comparison with other servers; and (O'Neil, col.1, line 4 – col.9, line 38)

O'Neil discloses, *"The present invention addresses the foregoing needs by providing, in one aspect, a plurality of network servers which directly handle load balancing on a peer-to-peer basis. Thus, when any of the servers receives a request, the server either processes the request or routes the request to one of its peers --depending on their respective loads and/or on the contents of the request. By implementing load balancing directly on the servers, the need for dedicated load balancing hardware is reduced, as are the disadvantages resulting from such hardware. Thus, for example, because each server has the capability to perform load balancing, access to a Web site managed by the server is not subject to a single point of failure. Moreover, requests tagged with IP addresses cached by remote DNSs or the requestor itself are handled in the same way as other requests, i.e., by being routed among the load balancing-enabled servers"* (O'Neil, col.3, lines 18-33). Hence, O'Neil teaches that when any of the servers (i.e., Applicant's apportioning server) receiving a request, the server either processes the request (i.e., Applicant's establishes a connection with the arrival IP address) or routes the request to one of its peer—depending on their respective loads (i.e., Applicant's distributes a load to a server having a lightest load in comparison with other servers) and/or on the contents of the request. O'Neil discloses, *"The invention has particular utility in connection with World Wide Web servers, but can be used with other servers as well, such as CORBA servers, ORB servers, FTP servers, SMTP servers, and Java servers"*

(O'Neil, col.1, lines 14-17). Hence, O'Neil teaches of the load balancing system used in a CORBA server environment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of O'Neil with the teachings of Glass to provide a technique for communicating with remote server objects when a client application does not know the location of the server object and the communication protocol used by the server object. In addition, according to O'Neil, *"Thus, there exists a need for a load balancing technique which is able to provide more accurate load balancing than the techniques described above, which is able to perform accurate load balancing despite cached server addresses or "maintained" Web browser addresses, which is not a significant bottleneck or source of single point failure, and which is able to maintain the association between a client and a server in order to preserve state information required to complete an electronic commerce transaction"* (O'Neil, col.3, lines 8-15). In addition, Glass discloses, *"this invention relates in general to the field of software systems, and more particularly to an improved system and method for distributed processing in a computer network"* (Glass, col.1, lines 6-8) and that *"a need has arisen for a system and method for distributed processing in a computer network that provides communications between objects distributed across the network"* (Glass, col.3, lines 62-65).

However, Glass and O'Neil do not explicitly teach,

- *a generating unit which generates, dynamically, the object reference <u>of the naming service in a hot standby environment</u> by dynamically setting address information contained in the object reference in accordance with connection information at a time of the request.*

Dugan teaches,

- *a generating unit which generates, dynamically, the object reference of the naming service in a hot standby environment by dynamically setting address information contained in the object reference in accordance with connection information at a time of the request.* (Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)

  Dugan teaches of at the time *"that there is a failure in the node cache database, or, when the hot cache 771a is currently unavailable to receive further updates, the system switches from the hot cache 771a to the standby cache 771b which then functions as a hot cache"* (Dugan, col.25, lines 47-50). In addition, Dugan teaches that *"once an active instance of S2 has been selected, the object reference for that S2 instance is returned to NT ... [where it] effectively translates the logical name S2 to an object identifier for the selected instance of S2... The object identifier includes an IP address, port, and other information identifying the physical location of the object instance"* (Dugan, col.29, lines 47-55). Hence, Dugan teaches of utilizing a naming service in a hot standby environment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Dugan with the teachings of Glass and O'Neil to provide a technique for communicating with remote server objects when a client application does not know the location of the server object and the communication protocol used by the server object.

7. With regard to *claims 2-4*, Glass, O'Neil, and Dugan disclose,

- *wherein said generating unit generates the CORBA object reference by setting at least the arrival address information contained in the connection information as the address information.* (Glass, abstract; col.1, lines 32-46; col.2, line 60 – col.3, line 35; col.4, lines 29-38; fig.1-4; O'Neil, col.1, line 4 – col.9, line 38; Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)
- *said CORBA object reference generating device comprising a system structure information control unit which controls system structure information showing a structure of a system in which a CORBA object reference is applied, wherein said generating unit generates the CORBA object reference by dynamically setting address information conforming to the structure of the system based on the system structure information.* (Glass, abstract; col.1, lines 32-46; col.2, line 60 – col.3, line 35; col.4, lines 29-38; fig.1-4; O'Neil, col.1, line 4 – col.9, line 38; Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)
- *wherein said system structure information shows at least a structure of a load distribution system and a hot standby system.* (Glass, abstract; col.1, lines 32-46; col.2, line 60 – col.3, line 35; col.4, lines 29-38; fig.1-4; O'Neil, col.1, line 4 – col.9, line 38; Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)
- *wherein the arrival address information is the apportioning IP address.* (Glass, abstract; col.1, lines 32-46; col.2, line 60 – col.3, line 35; col.4, lines 29-38; fig.1-4; O'Neil, col.1, line 4 – col.9, line 38; Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)

8. With regard to *claims 9-10*, Glass, O'Neil, and Dugan disclose,

- *wherein the generating unit generates the CORBA object reference of the naming service in a load distributed environment.* (Glass, col.3, lines 46-51; col.4, lines 8-12, lines 43-46; col.6, lines 31-35, lines 39-47, lines 51-54; col.7, lines 56-61; col.10, lines 48-59; fig.3-4; O'Neil, col.1, line 4 – col.9, line 38; Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)
- *wherein the object reference of the naming service is generated in a load distributed environment.* (Glass, col.3, lines 46-51; col.4, lines 8-12, lines 43-46; col.6, lines 31-35, lines 39-47, lines 51-54; col.7, lines 56-61; col.10, lines 48-59; fig.3-4; O'Neil, col.1, line 4 – col.9, line 38; Dugan, col.5, line 66 – col.6, line 51; col.25, lines 28-63; col.29, line 33 – col.30, line 11)

Response to Arguments

9. Applicant's arguments with respect to *claims 1-11* have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

September 27, 2007

Jason D. Cardone

Supervisory PE (AU2145)